IN THE CLAIMS

1. (Currently amended) A device for detecting the temperature of an oscillator crystal that has a crystal vibrator in an oscillator-crystal housing, in particular in a mobile radio apparatus, ~~characterized in that~~wherein a temperature sensor ~~(7)~~ is arranged on a carrier ~~(1, 11)~~ in such a way that it is subjected to the same ambient temperature as the oscillator crystal ~~(2)~~, or the crystal vibrator ~~(4)~~, wherein the temperature sensor ~~(7)~~ is provided on the same side of the carrier ~~(1, 11)~~ as the oscillator crystal ~~(2)~~, or the crystal vibrator ~~(4)~~ respectively, and is not separated from the oscillator crystal ~~(2)~~, or from the crystal vibrator ~~(4)~~, by a wall or by intervening circuit elements, and that the temperature sensor ~~(7)~~ is electrically connected parallel to the terminals ~~(A, B; 10)~~ of the crystal vibrator ~~(4)~~ or to a series connection of the crystal vibrator ~~(4)~~ and at least one coupling capacitor ~~(Ck)~~.

2. (Currently amended) A device as claimed in claim 1, ~~characterized in that~~wherein the temperature sensor ~~(7)~~ is arranged in the oscillator crystal housing ~~(2')~~.

3. (Currently amended) A device as claimed in claim 1, ~~characterized in that~~wherein the temperature sensor ~~(7)~~ is arranged on a printed circuit board ~~(1)~~ adjacent to the oscillator crystal housing ~~(2')~~.

4. (Currently amended) A device as claimed in claim 1, ~~characterized in that~~wherein the carrier ~~(1)~~ exhibits openings ~~(51)~~ between the heat-emitting circuit ~~(3)~~ and the oscillator

crystal ~~(2)~~.

5. (Currently amended) A device as claimed in claim 1, ~~characterized in that~~wherein the temperature sensor ~~(7)~~ is applied to a constant-current source ~~(13)~~ or a constant-voltage source ~~(20)~~ and an evaluation circuit which evaluates the temperature and/or the temperature gradient for compensation of the temperature-dependent resonant frequency of the oscillator crystal ~~(2)~~.

6. (Currently amended) A device as claimed in claim 1, ~~characterized in that~~wherein the resistance/temperature characteristic curve of the temperature sensor ~~(7)~~ is stored in the evaluation circuit.

7. (Currently amended) A device as claimed in claim 5, ~~characterized in that~~wherein the evaluation circuit is equipped with a measurement path in which the constant-current source ~~(13)~~ or constant-voltage source ~~(20)~~, the temperature sensor ~~(7)~~ and an analog/digital converter ~~(14)~~ to detect the voltage drop at the temperature sensor ~~(7)~~ are provided, and with an oscillator path in which an oscillator circuit comprising the oscillator crystal ~~(2)~~ with an amplifier ~~(16)~~ and at least one capacitor ~~(17)~~ are provided.

8. (Currently amended) A device as claimed in claim 7, ~~characterized in that~~wherein the measurement path and the oscillator path are separated from each other by filtering means ~~(19, Ck)~~.

9. (Currently amended) A device as claimed in claim 1, characterized by an oscillator circuit in which the oscillator crystal ~~(2)~~ is located and the constant-current source ~~(13)~~ or the constant-voltage source ~~(20)~~ can be applied sequentially, one after the other, to the parallel connection of the oscillator crystal ~~(2)~~, comprising a serial coupling capacitor ~~(Ck) applicable~~, and the temperature sensor ~~(7) where applicable~~.

10. (Currently amended) A device as claimed in claim 5, ~~characterized in that~~wherein the capacitance value of at least one capacitor ~~(17)~~ which forms an oscillator circuit with the oscillator crystal ~~(2)~~ can be readjusted by means of the evaluation circuit as a function of the detected temperature or temperature gradient.

11. (Currently amended) A device as claimed in claim 5, ~~characterized in that~~wherein the dividing ratio of an adjustable divider ~~(35)~~ of a phase-locked loop ~~(18)~~ can be adjusted by means of the evaluation circuit as a function of the detected temperature or temperature gradient.